

REMARKS

Claims 1, 5, 14, 24 – 40, and 42 are pending. Claims 2 – 4, 6 – 13, 15 – 23, and 41 have been cancelled. The amendment to claim 42 does not add new matter, because the amendment is supported in the specification on page 4, lines 23 – 25. The wording of claim 42 has also been amended to clarify that the foam has an open-cell structure and that the foaming temperature is a specific temperature. As discussed below, the amendment puts the application in clear condition for allowance. Additionally, entry of the amendment should not require further examination or search, because claim 1 has already been searched and examined.

- I. The Office action rejects claims 1, 5, 14, 24 – 41 under 35 U.S.C §102(e) over US 7,045,082 to Dietzen et al. (hereinafter, “Dietzen”), or under 35 U.S.C §102(a) over Dietzen, or under 35 U.S.C §103(a) over EP 1333051.

Dietzen’s foams do not have an open-cell structure, wherein the open-cell factor for the foam is at least 75%. Dietzen does not indicate whether its foams have an open-cell structure. However, in non-inventive example 1 of the present application a closed-cell foam was prepared from ULTRASON® 3010E, 1.8% H₂O, and 0.1% Talc at 249.1°C. This foam is comparable to the foam Dietzen exemplifies in Experiment 8, which was prepared from ULTRASON® 2010 and 1.5% H₂O at 250.2°C. Dr. Scherzer’s declaration dated August 27, 2008, indicates that the foams are comparable because the melting temperature and the melting behavior of ULTRASON® 2010 and polyether sulfone 3010E are comparable.

The Examiner correctly notes that other differences exist between Dietzen’s Example 8 and non-inventive Example 1 of the present application. None of the other differences were discussed in Dr. Scherzer’s declaration. The attached second declaration by Dr. Scherzer refers directly to the properties of the foams obtained in example 1 of Dietzen. It has been shown that all experiments according to example 1 of Dietzen result in open-cell foams. Dietzen, therefore, does not describe the present invention or provide a reason to arrive at the present invention. Applicants respectfully submit the present invention is novel and unobvious with regard to Dietzen.

II. The Office action rejects claim 42 under 35 U.S.C. §112, second paragraph.

The Examiner argues the phrase “a temperature higher by from 2 to 12°C than the temperature at which a closed-cell foam is formed” does not define any specific temperature, because it is not defined with respect to any specific foam.

The amendment to claim 42 should clarify that the temperature is defined with respect to the foam of the thermoplastic that is actually foamed. Claim 42 defines a temperature range at which an open-cell foam can be obtained for particular high-temperature-resistant thermoplastics, i.e. high-temperature-resistant thermoplastics selected from the group consisting of polyether sulfones, polysulfones, polyethersulfonamides, and combinations thereof. The temperature range for a given thermoplastic is determined by: (1) determining the highest temperature at which a closed-cell foam of the particular thermoplastic is formed, and (2) calculating the temperature range by raising the temperature by from 2 to 12°C.

Applicants respectfully submit that in view of the amendment, one of ordinary skill in the art would understand what is claimed, in light of the specification. In some instances, a claim may be rendered indefinite by reference to an object that is variable. However, MPEP §2173.05(b) explains, a claim limitation specifying that a certain part of a pediatric wheelchair be ‘so dimensioned as to be insertable through the space between the doorframe of an automobile and one of the seats’ was held to be definite.

Orthokinetics, Inc. v. Safety Travel Chairs, Inc., 806 F.2d 1565, 1 USPQ2d 1081 (Fed. Cir. 1986). The court stated that the phrase ‘so dimensioned’ is as accurate as the subject matter permits, noting that the patent law does not require that all possible lengths corresponding to the spaces in hundreds of different automobiles be listed in the patent, let alone that they be listed in the claims. In the present application, applicants respectfully submit the law does not require listing foaming temperatures for all possible high-temperature-resistant thermoplastics selected from the group consisting of polyether sulfones, polysulfones, polyethersulfonamides, and combinations thereof.

- III. The Office action rejects claim 42 under 35 U.S.C. §102(b) over US 5,017,622 to Bland et al. (hereinafter, "Bland").

The Examiner argued that in example 2 of Bland the extrusion temperature of 240°C is higher by from 2 to 12°C than the temperature at which a closed-cell foam is formed for millions of polymers. Applicants respectfully submit the amendment to claim 42 should clarify that the extrusion temperature is specified relative to the foaming temperatures for high-temperature-resistant thermoplastics selected from the group consisting of polyether sulfones, polysulfones, polyethersulfonamides, and combinations thereof.

The polyetherpolysulfones used by Bland at the temperature of 240°C is not a temperature of 2 to 12°C higher than the temperature at which a closed-cell foam is obtained, because page 5, lines 37 – 41 of Bland state, "[t]he products possess a highly uniform fine-cell structure consisting for the most part of thin-walled individually closed cells...." In short, Bland uses lower temperatures and obtains closed-cell foams.

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